CO50000-04915

Form Approved OMB No. 2040-0042

07127VIC-X

United States Environmental Protection Agency

EPA

Underground Injection Control Permit Application

(Collected under the authority of the Safe Drinking Water Act, Sections 1421, 1422, 40 CFR 144)

	T/A	C
U		

Read Attached Instructions Before Starting

For Official Use Only

Application approved mo day year	Date received mo day year	Permit Number	Well ID	FINDS Number

Owner Name	Owner Name
COLORADO DIVISION OF WILDLIFE	KATE LARSEN
Street Address: 4330 LA PORTE AVE	Phone Number: 970 484 1074
Street Address: 317 W. PROSPECT	Phone Number: 970 472 4371
City: FORT COLLINS	State: CO ZIP CODE: 80521
City: FORT COLLINS	State: CO ZIP CODE: 80526

- [X] Yes / [ ] No
- [ ] Private / [ ] Federal / [X] Other STATE
- [ ] Owner / [X] Operator

- [ ] A. Operating — Date Started mo day year:
- [ ] B. Modification/Conversion
- [X] C. Proposed

- [X] A. Individual / [ ] B. Area
- Number of Existing Wells: 0
- Number of Proposed Wells: 1
- Name(s) of field(s) or project(s): FOOTHILLS WILDLIFE LAB

A. Class(es) (enter code(s))	B. Type(s) (enter code(s))	C. If class is "other" or type is code 'x,' explain	D. Number of wells per type (if area permit)
V	5W20	SHALLOW INJECTION WITH LEACH FIELD	

Latitude Deg	Min	Sec	Longitude Deg	Min	Sec	Township and Range Sec	Twp	Range	1/4 Sec	Feet From	Line	Feet From	Line	Yes / No
40	35	71	105	9	41	6	7N	69W	SE					No

(Complete the following questions on a separate sheet(s) and number accordingly; see instructions)

For Classes I, II, III, (and other classes) complete and submit on a separate sheet(s) Attachments A–U (pp 2-6) as appropriate. Attach maps where required. List attachments by letter which are applicable and are included with your application.

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

A. Name and Title (Type or Print)	B. Phone No. (Area Code and No.)
CRAIG WORKMAN	(970) 472 4434
C. Signature	D. Date Signed
	6/25/01

EPA Form 7520-6 (Rev. 6-91)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
SHALLOW WASTE DISPOSAL SYSTEM/WELL INVENTORY REQUEST FORM

Shallow waste disposal systems/wells (Class V injection wells) release waste fluids into or above shallow ground water and include: commercial or industrial septic systems, sumps, drain fields, french drains, cesspools, abandoned drinking water wells, dry wells, and infiltration galleries. The Underground Injection Control (UIC) regulations require inventory information for all disposal systems/wells and additional information for certain types of systems/wells.

This form is designed to collect basic information for all systems/wells, to determine which are used for underground disposal of waste fluids, and additional information for those systems/wells with a greater potential for contaminating ground water.

I. IDENTIFICATION OF DISCHARGE/DISPOSAL SYSTEM/WELL

Please circle YES or NO to ALL items that pertain to the way your business or facility disposes of waste fluids (including wash water, storm water, sanitary bathroom wastes, and spills).
(Please call Valois Shea at 303-312-6276 or 1-800-227-8917 ext. 6276 should you need assistance.)

1. Does your business dispose of waste fluids through a connection to a municipal sewer system? **YES** (**NO**)
2. Excluding sanitary waste, does your business dispose of any waste fluids through a connection to a septic system with a drain field? (**YES**) **NO**
3. Are waste fluids discharged from your business facility to a holding tank that is pumped periodically? **YES** (**NO**)
4. Does your business have a floor drain or sink in a shop area, engine service or maintenance bay, or vehicle/equipment washing operation that is connected to a septic system, drain field, french drain, abandoned drinking water well, or dry well? **YES** (**NO**)
5. Is your business facility run as a dry shop (i.e no water, sewer or septic connections)? **YES** (**NO**)
6. Are waste fluids discharged from your business facility to a lagoon or pond? **YES** (**NO**)
7. Are waste fluids from your business facility discharged to surface water, lake, river, stream or wetland? **YES** (**NO**)
8. Are waste fluids from your business facility stored and/or hauled away (recycled)? This includes wash water, oil, fuel, solvents, antifreeze, etc. (**YES**) **NO**
   Please list Formalin
9. Is there any other discharge, disposal, or placement of any type of waste fluids from your facility through any type of system/well that releases these fluids into the ground? (**YES**) **NO**
   Please describe Raw Animal Blood

If you answered YES to either questions #2, #4, or #9, please complete Section II below.
If you did not, please go to Section III.

II. BASIC INVENTORY INFORMATION. Inventory all systems/wells separately. If more space is needed, please use and attach separate sheets. Please call Valois Shea at 303-312-6276 or 1-800-227-8917 ext. 6276 should you need assistance.

1. Type of Business or Facility (please include standard industry code(s) if known):
   Provide general wildlife health services to the terrestrial section of the Colorado Division of Wildlife.

SEE OTHER SIDE

2. Operating Status (AC = Active, AN = Abandoned, UC = Under Construction, TA = Temporarily Abandoned):
   System/Well #1 _____
   System/Well #2 _____
3. General Location (please attach a diagram of the system(s)/well(s) including construction design):
   System/Well #1 _____
   _____
   System/Well #2 _____
   _____
4. Date of Construction: For proposed wells, the date operation will begin:
   System/Well #1 _____ System/Well #1 _____
   System/Well #2 _____ System/Well #2 _____
5. Depth of Well/System (and ground water if known):
   System/Well #1 _____
   System/Well #2 _____
6. Average and Maximum Volumes of Disposed Fluids (gallons/day):
   System/Well #1 _____
   System/Well #2 _____
7. Source and Nature of Disposed Fluids (i.e., solvents, waste oil, brake fluid, antifreeze, waste paint, wash water, snow melt, cooling water, boiler blow down water, industrial process waste, miscellaneous spills, etc.):
   System/Well #1
   _____
   _____
   System/Well #2
   _____
   _____

III. CERTIFICATION

I certify, under penalty of law, that this document was prepared under my guidance and supervision, and that I am assured that qualified personnel properly gathered and evaluated the information reported here. To the best of my knowledge, the information presented above is true, accurate and complete.

Signature: _____ Date: 6/26/01

Name (please print): CRAIG WORKMAN Title: PROFESSIONAL ENGINEER

Name of Company: COLORADO DIVISION OF WILDLIFE Phone: (970) 472 4434

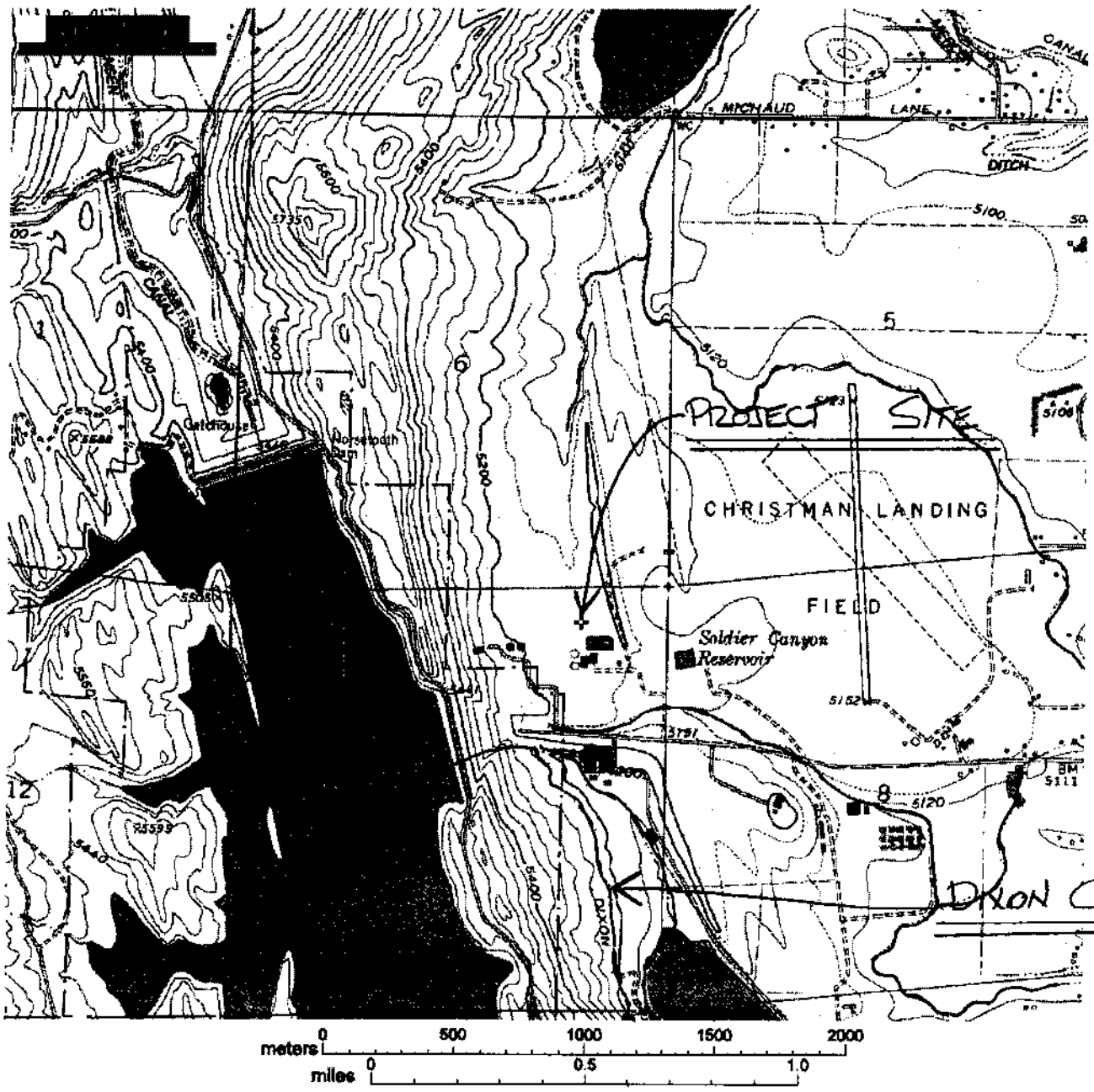
Address: 4330 WEST LA PORTE, FORT COLLINS CO 80521

Property Owner (If different than above): _____

Property Owner Address: _____

Please return this Form to: U.S. Environmental Protection Agency, Attention: Valois Shea, Mail Code: 8P-W-GW, 999 18th Street, Suite 300, Denver, CO 80202-2466

Target is UTM 13 486801E 4493529N - **HORSETOOTH RESERVOIR** quad [Quad Info]



STATE OF COLORADO
Bill Owens, Governor
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
AN EQUAL OPPORTUNITY EMPLOYER

Russell George, Director
6060 Broadway
Denver, Colorado 80216
Telephone: (303) 297-1192

For Wildlife-
For People

June 8, 2001

Doug Ryan
Larimer County Department of Health and Environment
1525 Blue Spruce Drive
Fort Collins, CO 80524

RE: Foothills Wildlife Lab Individual Sewage Disposal System Assessment

On June 6, 2001, a meeting was held between Mike Miller, Kate Larsen and myself with the Division of Wildlife, and Dave McCloskey and Doug Ryan from Larimer County Department of Health and Environment. At that time, a request was made for the Division of Wildlife to provide further information relating to the impacts on the proposed individual sewage disposal system. This assessment will provide an overview of lab procedures involving usage of the identified materials of concern along with the volume and material safety data sheets for each material. In addition, a feasibility of connectivity to City of Fort Collins sanitary sewer was requested and is included.

Identified Materials of Concern and Quantities

The following table is a listing of the materials expected to be disposed into the sewage system.

Description	Solution	Usage Volume
Neutral Buffered Formalin	10%	1 liter/month
LpH	10%	Trace amounts from wiping surfaces and cleaning instruments
Inspector's Choice Grease Release Remover	5%	1 liter/week
Raw Animal Blood	1 liter/~10 gallons fresh water	1 liter/week

Note: See attachments for MSDS sheets

Summary of General Lab Procedures

The following is a general list of typical procedures to be practiced in all laboratory and necropsy areas utilizing the materials identified above. These follow procedures typically described under "standard laboratory precautions" for handling biological materials.

General Cleaning:

1. For cleaning all surfaces, first use Inspector's Choice to remove gross debris, rinse thoroughly. Remove excess water and then wipe the surfaces with a 10 % solution of LpH. This disinfectant has been found to inactivate the agent that causes scrapie, and is thought to have the same effect on the CWD agent. LpH is also germicidal, fungicidal, tuberculocidal, and virucidal. Use it to clean all blood and fluid spills.

Necropsy instruments:

2. Do not remove any instruments from the lab.
3. Instruments must be used only in the manner for which they are intended.
4. After each individual sampling, instruments should be washed with dish soap then soaked for at least 30 minutes in a 10% solution of LpH. Rinse instruments thoroughly with water before next use. When done for the day, instruments can be left to soak in fresh LpH solution over night.
5. Remove instruments from LpH in the morning and rinse thoroughly with water; leave them to air dry (Remember to leave scissors open so they do not rust). Store instruments properly when dry.
6. LpH should be changed every 24 hours, or after heavy use.

Cleaning and disinfecting the lab:

7. When done with all processing for the day, tables, floors, transports and instruments must be properly cleaned and stored. For instruments see above.
8. Begin by spraying Inspector's Choice, via the foamer, on the floors, tables and tilt trucks. Once surfaces are thoroughly coated, allow the Inspector's Choice to work for a few minutes. Use a brush to scrub surfaces and help loosen debris. Rinse thoroughly with clean water.
9. Once clean, tilt trucks can be returned to the designated area in the cooler to dry.
10. Use a squeegee to remove excess water from floor to aid drying.
11. Once surfaces are dry, saturate with a 10% solution of LpH. There is a spray bottle with dilution already mixed up. Allow this to sit for at least 30 minutes or let it air dry. Surfaces then can be rinsed with water, but is not necessary.

Cleaning the walk in cooler:

12. Clean up blood and fluids quickly. Use Inspector's Choice as above to clean.
13. Once the floor is dry, spray thoroughly with LpH and allow to air dry.
14. Use drain cleaner as necessary to assist with drainage.

Infectious agents studied under laboratory conditions

Much of the work conducted in this laboratory facility is related to ongoing studies of chronic wasting disease (CWD), a prion disease of native deer and elk. CWD is endemic in Larimer County, and has been endemic at the Foothills Wildlife Research Facility (FWRF) and adjacent university properties for over 30 years. The known natural host range of CWD is limited to deer (*Odocoileus* spp.) and elk (*Cervus elaphus*). Molecular and experimental studies conducted to date have demonstrated that risk to humans and domestic livestock is exceedingly small, if not zero. Both the World Health Organization and the US Food and Drug Administration's Transmissible Spongiform Encephalopathy Advisory Committee have stated that there is no evidence of CWD transmission to humans. Ongoing research involving the CWD agent at FWRF has already been reviewed and approved by the Colorado State University Biosafety Committee (CSUBC), as have laboratory protocols currently used in existing facilities. Known infectious tissues are handled in accordance with CSUBC-approved protocols, and the amount of infectious agent that may be discharged via the proposed Individual Sewage Disposal System is below the threshold for established detection methods.

Feasibility of Connecting to City of Fort Collins Sanitary Sewer

To connect the proposed facility to the city sewer system, approximately 2,500 feet of new 6 inch diameter service line would have to be constructed to connect into the nearest city sewer manhole. Additional items include, tap fee, permits and easements from Colorado State University and The City of Fort Collins. It is estimated that the additional construction would cost $60,000.00 and take and additional 2 months of time for planning and construction. Currently, the Division of Wildlife has a contract to install the proposed individual sewage disposal system for approximately $1,500.00.

Conclusion

In an effort to clear up any concerns expressed by the Larimer County Department of Health and Environment staff, the Division of Wildlife has set forth clear operating procedures and policies concerning the use and disposal of the identified materials in a laboratory environment.

Please feel free to contact me at (970) 472-4434 with any further questions.

Sincerely,

Craig Workman
Project Engineer
Colorado Division of Wildlife

Enclosures:
Neutral Buffered Formalin Material Saftey Data Sheet
LpH Material Saftey Data Sheet
Inspector's Choice Grease Release Remover Material Saftey Data Sheet

FISHER SCIENTIFIC -- FORMALIN NEUTRAL BUFFERED 10% W/V, SF100 20

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MSDS Safety Information

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FSC: 6550
MSDS Date: 06/02/1998
MSDS Num: CJVWD
LIIN: 00N092926
Product ID: FORMALIN NEUTRAL BUFFERED 10% W/V, SF100 20
MFN: 01
Responsible Party
Cage: 1B464
Name: FISHER SCIENTIFIC
Address: ONE REAGENT LANE
City: FAIRLAWN NJ 07410
Info Phone Number: 201-796-7100
Emergency Phone Number: 201-796-7100
Review Ind: Y
Published: Y

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Contractor Summary

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Cage: 1B464
Name: FISHER SCIENTIFIC CO. CHEMICAL MFG DIV
Address: 1 REAGENT LANE
City: FAIR LAWN NJ 07410-2802
Phone: 201-796-7100

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Ingredients

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Cas: 50-00-0
RTECS #: LP8925000
Name: FORMALDEHYDE EINECS/ELINCS: 200-001-8.
Percent by Wt: 4.
OSHA PEL: see 1910.1048
ACGIH TLV: NOT ESTABLISHED
ACGIH STEL: C0.37 MG/M3;C0.3 PPM
EPA Rpt Qty: 100 LBS
DOT Rpt Qty: 100 LBS

Cas: 67-56-1
RTECS #: PC1400000
Name: METHYL ALCOHOL EINECS/ELINCS: 200-659-6.
% low Wt: 1.
% high Wt: 2.
OSHA PEL: 260 MG/M3;200 PPM
ACGIH TLV: 262 MG/M3;200 PPM
ACGIH STEL: 328 MG/M3;250 PPM
EPA Rpt Qty: 5000 LBS
DOT Rpt Qty: 5000 LBS

Cas: 7558-79-4
RTECS #: WC4500000
Name: SODIUM MONOHYDROGEN PHOSPHATE; (SODIUM PHOSPHATE DIBASIC)
EINECS/ELINCS: 231-448-7.
Percent by Wt: .65
EPA Rpt Qty: 5000 LBS
DOT Rpt Qty: 5000 LBS

Cas: 7732-18-5
RTECS #: ZC0110000
Name: WATER EINECS/ELINCS: 231-791-2.
% low Wt: 91.9

% high Wt: 92.

Cas: 10049-21-5
Name: SODIUM DIHYDROGEN PHOSPHATE MONOHYDRATE; (SODIUM PHOSPHATE MONOBASIC, MONOHYDRATE) EINECS/ELINCS: UNLISTED.
Percent by Wt: .4

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Health Hazards Data

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Route Of Entry Inds - Inhalation: YES
Skin: YES
Ingestion: YES
Carcinogenicity Inds - NTP: YES
IARC: YES
OSHA: YES
Effects of Exposure: ACUTE: EYES:CAUSES EYE IRRITATION. CONTACT MAY CAUSE ULCERATION OF CONJUNCTIVA AND CORNEA. SKIN: CAUSES SKIN IRRITATION. MAY CAUSE SKIN SENSITIZATION, AN ALLERGIC REACTION, WHICH BECOMES EVIDENT UPON RE-EXPOSURE TO THS MATERIAL. INGESTION: CAUSES GASTROINTESTINAL IRRITATION WITH NAUSEA, VOMITING AND DIARRHEA. MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION, CHARACTERIZED BY EXCITEMENT, FOLLOWED BY HEADACHE, DIZZINESS, DROWSINESS, AND NAUSEA. ADVANCED STAGES MAY CAUSE COLLAPSE, U NCONSCIOUSNESS, COMA AND POSSIBLE DEATH DUE TO RESPIRATORY FAILURE. MAY CAUSE SYSTEMIC TOXICITY INCLUDING CENTRAL NERVOUS SYSTEM DEPRESSION, (EFTS OF OVEREXP)
Explanation Of Carcinogenicity: FORMALDELHYDE: IARC MONOGRAPHS ON THE EVALUATION OF CARCINOGENIC RISK OF CHEMICALS TO MAN, VOLUME 62, PAGE 217, 1995: GROUP 2A. NTP 8TH ANNUAL REPORT ON CARCINOGENS, 1998: REASONABLY ANTICIPATED TO BE HUMAN CARCINOGEN. OSHA REGULATED: 29 C FR 1910.1048.
Signs And Symptions Of Overexposure: HLTH HAZ: CONVULSIONS, COMA, AND POSSIBLE DEATH DUE TO RESPIRATORY FAILURE. INHALATION: MAY CAUSE ASTHMATIC ATTACKS DUE TO ALLERGIC SENSITIZATION OF THE RESPIRATORY TRACT. CHRONIC: FORMALDEHYDE HAS BEEN ASSOCIATED WITH NASAL AND NASOPHARYNG EAL CANCERS. REPEATED EXPOSURE MAY CAUSE SKIN DISCOLORATION AND THICKENING AND NAIL DECAY. TARGET ORGANS: CENTRAL NERVOUS SYSTEM.
First Aid: EYES: FLUSH W/PLENTY OF H*2O FOR AT LST 15 MINS, OCCAS LIFTING UPPER & LOWER LIDS. GET MED AID IMMED. DO NOT ALLOW VICTIM TO RUB/KEEP EYES CLOSED. SKIN: IMMED FLUSH W/PLENTY OF SOAP & H*2O FOR AT LST 15 MINS WHILE REMOVING CONTAMD CLTHG & S HOES. GET MED AID IF IRRIT DEVELOPS/PERSISTS. WASH CLTHG BEFORE REUSE. DESTROY CONTAMD SHOES. INGEST: DO NOT INDUCE VOMIT. IF VICTIM IS CONSCIOUS & ALERT, GIVE 2-4 CUPFULS OF MILK/H*2O. NEVER GIVE ANYTHING BY MOUTH TO UNCON PERS. GET MED AI D IMMED. INGEST: GET MED AID IMMED. REMOVE FROM EXPOS TO FRESH AIR IMMED. IF BRTHG IS DFCLT, GIVE OXYG. DO NOT USE MOUTH-TO-MOUTH RESP IF BRTHG HAS (SUPDAT)

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Handling and Disposal

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Spill Release Procedures: GENERAL INFO: USE PROPER PERSONAL PROTECTIVE EQUIPMENT AS INDICATED IN SECTION 8. SPILLS/LEAKS: REMOVE ALL SOURCES OF IGNITION. ABSORB SPILL USING AN ABSORBENT, NON-COMBUSTIBLE MATERIAL SUCH AS EARTH, SAND, OR VERMICULITE. PROVIDE VENTILATI ON. A VAPOR SUPPRESSING FOAM MAY BE USED TO REDUCE VAPORS. WATER SPRAY MAY REDUCE VAPOR BUT MAY NOT PREVENT IGNITION IN CLOSED SPACES.
Waste Disposal Methods: DISPOSE OF IN A MANNER CONSISTENT WITH FEDERAL, STATE, AND LOCAL REGULATIONS. RCRA D-SERIES MAXIMUM CONCENTRATIONS OF CONTAMINANTS, RCRA D-SERIES CHRONIC TOXICITY REFERENCE LEVELS, RCRA F-SERIES, RCRA P-SERIES: NONE LISTED. RCRA U-SERIES: C AS# 50-00-0: WASTE NUMBER U122. CAS # 67-56-1: WASTE NUMBER U154 (IGNITABLE WASTE).
Handling And Storage Precautions: USE ONLY IN WELL VENT AREA. AVOID CNTCT W/EYES, SKIN, & CLTHG. EMPTY CNTNRS RETAIN PROD RESIDUE, (LIQ &/VAP), & CAN BE DANGEROUS. KEEP CNTNR TIGHTLY CLSD. AVOID CNTCT W/HEAT, SPARKS & FLAME. DO NOT INGEST/INHALE.
Other Precautions: DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL,GRIND/EXPOSE EMPTY CONTAINERS TO HEAT, SPARKS/OPEN FLAMES. STORAGE: KEEPAWAY FROM HEAT, SPARKS, & FLAME. KEEP AWAY FROM SOURCES OF IGNITION.

STOREIN A TIGHTLY CLOSED CONTAINER. STORE IN A COOL, DRY, WELL-VENTILATED AREAAWAY FROM INCOMPATIBLE SUBSTANCES.

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Fire and Explosion Hazard Information

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Flash Point: =85.C, 185.F
Lower Limits: 7.0%
Extinguishing Media: FOR SM FIRES, USE DRY CHEM, CARBON DIOXIDE, WATER SPRAY/ALCOHOL-RESISTANT FOAM. FOR LGE FIRES, USE DRY CHEM, CARBON DIOXIDE, ALCOHOL-RESISTANT FOAM/WATER SPRAY.
Fire Fighting Procedures: USE NIOSH APPROVED SCBA & FULL PROTECTIVE EQUIPMENT (FP N). USE WATER SPRAY TO KEEP FIRE-EXPOSED CONTAINERS COOL. COMBUSTIBLE LIQUID. CONTAINERS MAY EXPLODE WHEN HEATED. COOL CONTAINERS W/FLOODING QUANTITIES OF WATER UNTIL WELL AFTER FIRE I S OUT.
Unusual Fire/Explosion Hazard: NFPA RATING: NOT PUBLISHED.

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Control Measures

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Respiratory Protection: FOLLOW THE OSHA RESPIRATOR REGULATIONS FOUND IN 29 CFR 1910.134 OR EUROPEAN STANDARD EN 149. ALWAYS USE A NIOSH OR EUROPEAN STANDARD EN 149 APPROVED RESPIRATOR WHEN NECESSARY.
Ventilation: USE ADEQUATE GENERAL OR LOCAL EXHAUST VENTILATION TO KEEP AIRBORNE CONCENTRATIONS BELOW THE PERMISSIBLE EXPOSURE LIMITS.
Protective Gloves: IMPERVIOUS GLOVES (FP N).
Eye Protection: ANSI APPROVED CHEMICAL WORKERS GOGGLES (FP N).
Other Protective Equipment: EYE WASH AND DELUGE SHOWER MEETING ANSI DESIGN CRITERIA (FP N).
Work Hygienic Practices: WASH THOROUGHLY AFTER HANDLING. --TRANSPORT INFO: WT GAIN, IHL-RAT TCLO=12 UG/M3/24H. EMBRYO/FETUS: CYTOLOGICAL CHANGES, IHL-RAT TCLO=1 MG/M3/24H; STUNTED FETUS & DEATH, IPR-MOUSE TDLO=240(OTHER INFO)
Supplemental Safety and Health: FIRST AID: CEASED. APPLY ARTF RESP USING OXYG & SUITABLE MECH DEVICE SUCH AS BAG & MASK. NOTES TO MD: TREAT SYMPTOMATICALLY & SUPPORTIVELY. EXTING MEDIA: CARBON DIOXIDE, ALCOHOL-RESISTANT FOAM/WATER SPRAY. MATLS TO AVOID: PEROXYFORMIC ACID. FORMALDEHYDE REACTS VIOLENTLY WHEN MIXED W/STRONG OXIDIZERS.

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Physical/Chemical Properties

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Boiling Point: >93.9C, 201.F
B.P. Text: 201-212F
Melt/Freeze Pt: =0.C, 32.F
Vapor Pres: 2326 MM HG @ 25C
Vapor Density: 1.0
Spec Gravity: 1.10
PH: 6.9-7.1
Solubility in Water: SOLUBLE
Appearance and Odor: CLEAR LIQUID; STRONG ODOR - PUNGENT ODOR.

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Reactivity Data

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Stability Indicator: YES , ANALINE/ (SUPDAT)
Stability Condition To Avoid: IGNITION SOURCES, OXIDIZERS.
Materials To Avoid: SOLUTION WILL POLYMERIZE & SEPARATE BELOW 00C & ABOVE 670C. FORMALDEHYDE REACTS W/HYDROCHLORIC ACID TO FORM A POTENT CARCINOGEN, BIS-CHLOROMETHYL ETHER. IT REACTS EXPLOSIVELY W/NITROGEN DIOXIDE, NITROMETHANE, PERCHLORIC ACI
Hazardous Decomposition Products: IRRITATING AND TOXIC GASES.
Hazardous Polymerization Indicator: NO
Conditions To Avoid Polymerization: HAS NOT BEEN REPORTED.

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Toxicological Information

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Toxicological Information: RTECS #: CAS # 50-00-0: LP8925000. CAS # 67-56-1: PC1400000, CAS # 7558-79-4: WC4500000, CAS # 7732-18-5: ZC0110000, CAS #

10049-21-5 UNLISTED. LD50/LC50: CAS# 50-00-0. INHAL, MOUSE LC50=400 MG/M3/2H; INHAL, RAT: LC50=203 MG/M3; ORAL, MOUS E: LD50=42 MG/KG; ORAL, RAT: LD50=100 MG/KG; SKIN, RABBIT: LD50=270 MG/KG; CAS# 67-56-1: INHAL, RAT: LC50=64000 PPM/4H; ORAL, MOUSE: LD50=7300 MG/KG; ORAL, RABBIT: LD50=14200 MG/KG; ORAL, RAT: LD50=5628 MG/KG; SKIN, RABBIT: LD50=15800 MG/K G; CAS# 7558-79-4: ORAL,RAT: LD50= 17 GM/KG; CAS# 7732-18-5: ORAL, RAT: LD50=>90 ML/KG; CAS# 10049-21-5: N/P. CARCIN: CAS#50-00-0: ACGIH: A2- (TRANSPORT INFO)

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Ecological Information

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Ecological: ECOTOXICITY: ATLANTIC SALMON LC50=173 UL//L/96H CATFISH (FRESH WATER) TLM=32 PPM/24H FLOUNDER (SALT WATER) TLM-100-330 PPM/48H FATHEAD MINNOW LC50=10-100 UL/L/96H RAINBOW TROUT LC50=168MG/L/48H ZEBRAFISH LC50=41 MG/L/96H WATER FLEA LC50-52M G/L/24H. ENVIRONMENTAL FATE, PHYS/CHEM, OTHER: NOT AVAIL. CLEAN AIR ACT; CAS# 50-00-0 & CAS# 67-56-1 IS LISTED AS A HAZARDOUS AIR POLLUTANT (HAP). MATL DOES NOT CNTN ANY CLASS 1 OR CLASS 2 OZONE DEPLETORS. CLEAN WATER ACT: CAS# 50-00-0 & CA S# 7558-79-4 IS LISTED AS A HAZ SUBSTANCE UNDER CWA. NONE OF CHEMS IN PROD ARE LISTED AS PRIORITY POLLUTANTS OR TOXIC POLLUTANTS UNDER CWA.

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MSDS Transport Information

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Transport Information: SHIPPING NAME : US DOT, IATA, RID/ADR/IMO: NO INFORMATION AVAILABLE. CANADA TDG: FORMALDEHYDE SOLNS: HAZ CLASS: 3(8)(9.2); UN NUMBER: UN1198; PACKING GROUP: III. --TOX INFO: SUSPECTED HUMAN CARCIN. CALIFORNIA: CARCIN-INITIAL DATE 1/1/88. N IOSH: OCCUP CARCIN.

OSHA: POSS SECECT CARCIN. IARC: GROUP 2A CARCIN. EPIDEMIOLOGY: FORMALDEHYDE HAS BEEN SHOWN TO INCR INCIDENCE OF LUNG CANCER IN WORKERS. IN ANOTHER STUDY, THERE WAS INCR IN MORTALITY FROM LUNG CANCER WHEN WORKERS WERE EX POSED TO CONC OVER 2 PPM OF FORMALDEHYDE. TERTOGENICITY: FORMALDEHYDE EFTS ON NEWBORN: BEHAVIORAL, IHL-RAT TCLO=50 UG/M3/4H; BIOCHEM/METABOLIC & (WORK HYGIENE)

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Regulatory Information

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Sara Title III Information: SARA SECTION 302 (RQ): CAS# 50-00-0: FINAL RQ=100 POUNDS (45.4 KG) CAS# 67-56-1: FINAL RQ=5000 POUNDS (2270 KG) CAS# 7558-79-4: FINAL RQ= 5000 POUNDS (2270 KG). SECTION 302 (TPQ): CAS# 50-00-0:TPQ=500 POUNDS; RQ=100 POUNDS (DOES NOT MEET TO XICITY CRITERIA BUT BECAUSE OF HIGH PROD VOLUME & RECOGNIZED TOXICITY IS CONSIDERED CHEMICAL OF CONCERN). SARA CODES: CAS# 50-00-0: ACUTE, CHRONIC. CAS# 67-56-1:ACUTE, FLAMMABLE. SECTION 313: THIS MATERIAL CONTAINS FORMALDEHYDE (CAS#50-00-0 ,4 0%), WHICH IS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 312 OF SARA TITLE III & 40 CFR PART 373. FOR MORE INFO CONTACT NEHC (FP N).

Federal Regulatory Information: TSCA: CAS# 50-00-0, CAS# 67-56-1, CAS# 7558-79-4, & CAS# 7732-18-5 IS LISTED ON TSCA INVENTORY. CAS # 10049-21-5 IS NOT ON TSCA INVENTORY. IT IS A HYDRATE & EXEMPT FROM TSCA INVENTORY REQS (40CFR720.3(U)(2)). HLTH & SFTY REPORTING LIST: NON E ARE LISTED. CHEMICAL TEST RULES: NONE ARE LISTED. SECTION 12B: NONE ARE LISTED. EUROPEAN/INTERNATIONAL REGS: EUROPEAN LABELING IN ACCORD W/EC DIRECTIVES: HAZARD SYMBOLS: NOT AVAIL. RISK PHRASES: N/P. SFTY PHRASES: N/P. WGK(WATER DANGER/PR OT): CAS# 50-00-0: 2; CAS# 67-56-1: 1; CAS# 7758-79-4: 1; CAS# 7732-18-5: NO INFO AVAIL; CAS# 10049-21-5: 1. FOR MORE INFORMATION CONTACT NEHC (FP N).

State Regulatory Information: CAS# 50-00-0 & 67-56-1 CAN BE FOUND ON FOLLOWING STATE RIGHT TO KNOW LISTS: CALIFORNIA, NEW JERSEY, FLORIDA. PENNSYLVANIA, MINNESOTA, MASSACHUSETTS. CAS# 7558-79-4 CAN BE FOUND ON CA, NJ, PA & MA STATE RIGHT TO KNOW LISTS. CAS# 7732-18-5; 1 0049-21-5 IS NOT PRESENT ON STATE LISTS FROM CA, PA, MN, MA, FL, OR NJ. THE FOLLOWING STATEMENT(S) IS (ARE) MADE IN ORDER TO COMPLY WITH THE CALIFORNIA SAFE DRINKING WATER ACT: WARNING: THIS PRODUCT CONTAINS FORMALDEHYDE, A CHEMICAL KNOWN T O THE STATE OF CALIFORNIA TO CAUSE CANCER. CALIFORNIA NO SIGNIFICANT RISK LEVEL: CAS# 50-00-0: NO SIGNIFICANT RISK LEVEL = 40 UG/DAY.

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Other Information

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Other Information: ACC# 41127. EMER OVERVIEW: APPEARANCE: CLEAR. FL PT: 185F. DANGER! COMBUST LIQ. CAUSES RESP TRACT IRRIT. CAUSES SKIN & EYE IRRIT. MAY CAUSE ALLERGIC SKIN RXN. SUBSTANCE HAS CAUSED ADVERSE REPRO & FETAL EFTS IN ANIMALS. MAY CAUSE CNS DEPRES S. CAUSES DIGESTIVE TRACT IRRIT. CNTNS FORMALDEHYDE. RESP SENSITIZER. POTNTL CANCER HAZ. TARGET ORGS: CNS. --WORK HYGIENE: MG/KG. SPECIFIC DEVEL ABNORMS: CRANIOFACIAL & MUSCULOSKELETAL, IPR-MOUSE TDLO=240 MG/KG. REPRO EFTS: FORMALDEHYDE EF TS ON FERTILITY: MALE INDEX, ITT-RAT TDLO=400 MG/KG; POST-IMPLANTATION MORTALITY, IMS-MOUSE TDLO=259 MG/KG. FOR MORE INFO CONTACT NEHC (FP N).

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HAZCOM Label

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Product ID: FORMALIN NEUTRAL BUFFERED 10% W/V, SF100 20
Cage: 1B464
Company Name: FISHER SCIENTIFIC CO. CHEMICAL MFG DIV
Street: 1 REAGENT LANE
City: FAIR LAWN NJ
Zipcode: 07410-2802
Health Emergency Phone: 201-796-7100
Label Required IND: Y
Date Of Label Review: 11/17/1999
Status Code: A
Origination Code: F
Chronic Hazard IND: Y
Eye Protection IND: YES
Skin Protection IND: YES
Signal Word: WARNING
Respiratory Protection IND: YES
Health Hazard: Moderate
Contact Hazard: Moderate
Fire Hazard: Moderate
Reactivity Hazard: None
Hazard And Precautions: COMBUSTIBLE. ACUTE: EYES:CAUSES IRRITATION. CONTACT MAY CAUSE ULCERATION OF CONJUNCTIVA & CORNEA. SKIN: CAUSES IRRITATION. MAY CAUSE SENSITIZATION. INGESTION:CAUSES GASTROINTESTINAL IRRITATION WITH NAUSEA, VOMITING & DIARRHEA. MAY CAUSE CEN TRAL NERVOUS SYSTEM DEPRESSION, CHARACTERIZED BY EXCITEMENT, FOLLOWED BY HEADACHE, DIZZINESS, DROWSINESS, & NAUSEA. ADVANCED STAGES MAY CAUSE COLLAPSE, UNCONSCIOUSNESS, COMA & POSSIBLE DEATH DUE TO RESPIRATORY FAILURE. INHALAITON: MAY CAUSE ASTHMATIC ATTACKS DUE ALLERGIC SENSITIZATION. CHRONIC: CANCER HAZARD. FORMALDEHYDE IS LISTED AS AN ANIMAL LUNG CARCINOGEN (FP N). SKIN & RESPIRATORY SENSITIZATION.

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Disclaimer (provided with this information by the compiling agencies): This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever expressly or implied warrants, states, or intends said information to have any application, use or viability by or to any person or persons outside the Department of Defense nor any person or persons contracting with any instrumentality of the United States of America and disclaims all liability for such use. Any person utilizing this instruction who is not a military or civilian employee of the United States of America should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation regardless of similarity to a corresponding Department of Defense or other government situation.

SPARTAN CHEMICAL COMPANY, INC. - MATERIAL SAFETY DATA SHEET

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label)
INSPECTOR'S CHOICE

Manufacturer's Name - Spartan Chemical Company, Inc.
Emergency Telephone No. - 800/537-8990
Address - 110 N. Westwood Ave., Toledo, OH 43607

NFPA RATINGS: Health-3 Fire-0 React-0
HMIS RATINGS: Health-3 Fire-0 React-0 Pers. Prot.-B

SECTION II: HAZARDOUS INGREDIENTS

Chemical Name(s) - Sodium hydroxide
CAS Registry No. - 1310-73-2 Weight - <3%
TWA (mg/m3) - N/A STEL (mg/m3) - N/A Ceiling (mg/m3) - 2
Carcinogen - No

Chemical Name(s) - Sodium metasilicate
CAS Registry No. - 6834-92-0 Weight 3-5%
TWA (mg/m3) - N/A STEL (mg/m3) - N/A Ceiling (mg/m3) - N/A
Carcinogen - No

SECTION III: PHYSICAL DATA

Boiling Point - >212 F
Specific Gravity (H2O = 1) - 1.06
Percent Solid by Weight - 14-15
Vapor Pressure - Unknown
Evaporation Rate (But. Ace. = 1) - <1
Vapor Density (Air = 1) - Unknown
Solubility in Water - Complete
Appearance and Odor - Clear, light yellow-gold, slight soapy odor
Material Is - Liquid
pH - 13.2-13.5

SECTION IV: FIRE & EXPLOSION HAZARD DATA

Flash Point - None
Method Used - ASTM - D56
Flammable Limits - N/A
Extinguishing Media - N/A
Special Fire Fighting Procedures - None
Unusual Fire and Explosion Hazards - None

SECTION V: HEALTH HAZARD DATA

Effects of Overexposure - Conditions to Avoid:
Severe eye and skin irritant. Avoid prolonged skin contact.
Avoid breathing of mists. Oral LD50 >500 mg/kg.

Threshold Limit Value - Not established
Conditions Aggravated by Use - Unknown
Primary Routes of Entry: Skin Contact, Inhalation
Emergency and First Aid Procedures -
Eyes: Remove contact lenses. Flush eyes with water for at least 15 minutes. Call a physician.
Skin: Flush skin with water. Wash clothing before reuse.
Ingestion: If swallowed, do NOT induce vomiting. Give large quantities of water. Call a physician immediately.
Never give anything by mouth to an unconscious person.

SECTION VI: REACTIVITY DATA

Stability: Stable X
Incompatibility (Materials to Avoid) - Do not mix with strong acids.
Hazardous Decomposition Products - None known
Hazardous Polymerization: Will Not Occur X

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled -
Flush with copious amounts of water into sanitary sewer system.
Waste Disposal Method - Same as above

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type) - None normally required
Ventilation - Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.
Protective Gloves (Specify Type) - Rubber gloves
Eye Protection (Specify Type) - Safety goggles
Other Protective Equipment - None

SECTION IX: SPECIAL PRECAUTIONS

Precautions to Be Taken in Handling and Storing - Nothing special
Other Precautions - None

Spartan Chemical Company, Inc. - INSPECTOR'S CHOICE
Ref: 29 CFR 1910:1200 (OSHA)

NAME: Ronald T. Cook
TITLE: Manager, Regulatory Affairs
DATE: February 12, 1998
SUPERCEDES: July 18, 1996

United States Environmental Protection Agency
Underground Injection Control Permit Application

Attachment H. – Operating Data

H. – Operating Data

1) Average and maximum daily rate of fluids to be injected:

Standard Sanitary Wastes	All types	335 gal/day
Non-Sanitary Wastes	Raw animal blood	0.034 liter/day

2) Average injection pressure N/A

3) Nature of annulus fluid N/A

4) Class 1 source and analysis of chemical N/A

5) Class 2 source and analysis of injection fluid N/A

6) Class 3 qualitative analysis N/A

United States Environmental Protection Agency
Underground Injection Control Permit Application

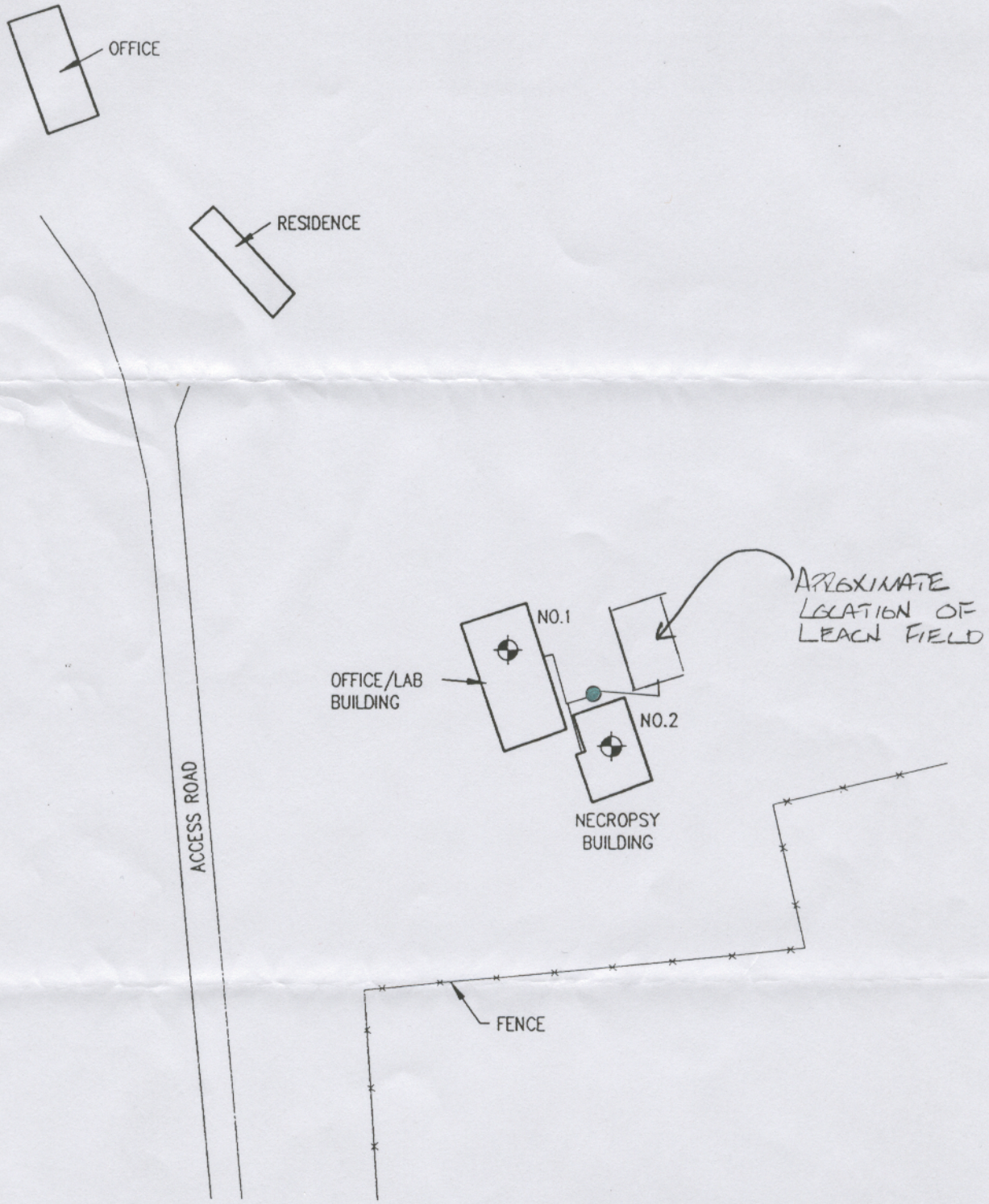
Attachment K. – Injection Procedures

K. – Injection Procedures

The injection mechanism for this well will be as standard gravity leach field downstream of a 1,000 gallon concrete septic tank.

United States Environmental Protection Agency
Underground Injection Control Permit Application

Attachment M. – Construction Details



LEGEND:

TEST BORINGS

septic tank

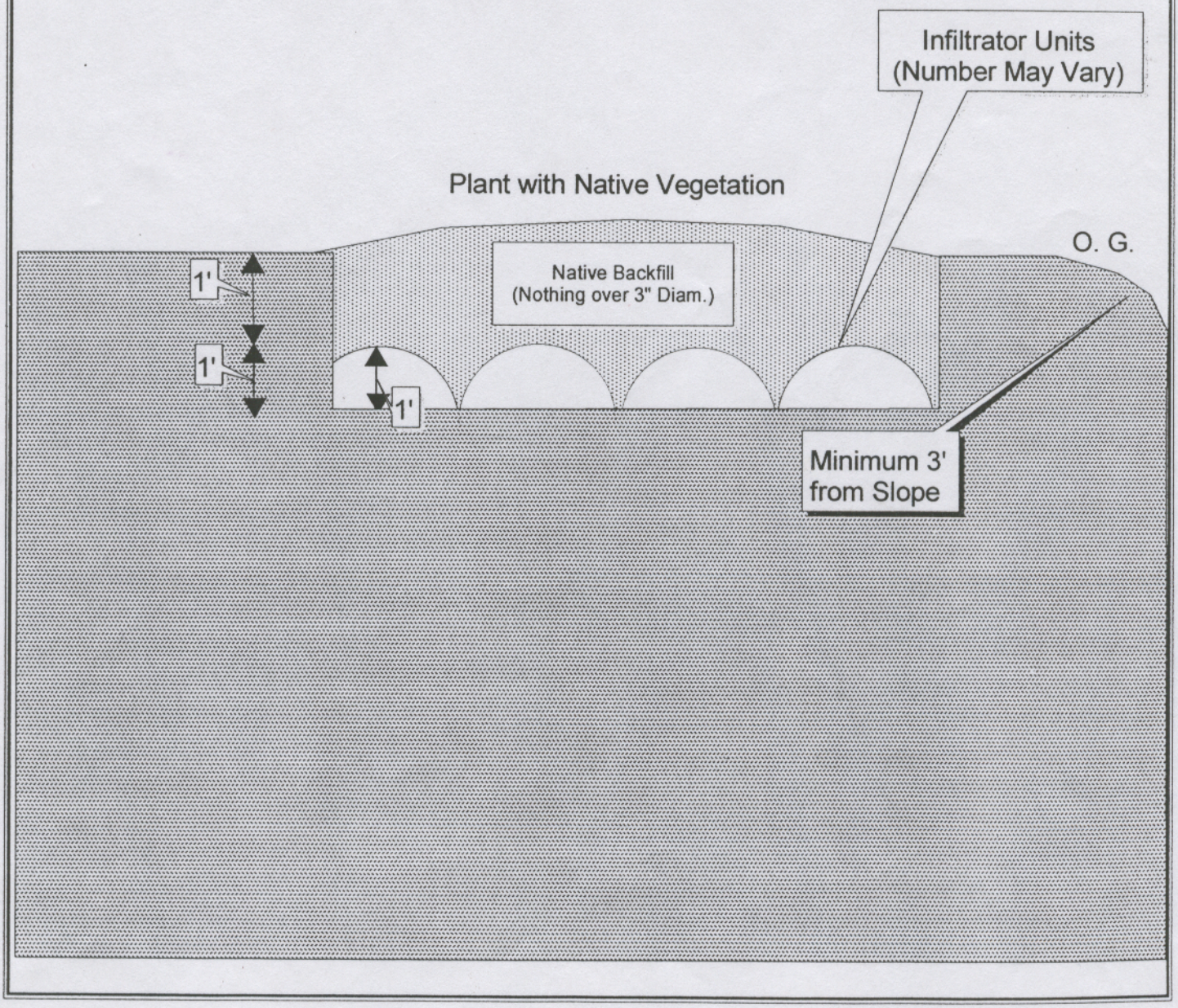
...GRAM IS FOR GENERAL LOCATION ONLY,
...O IS NOT INTENDED FOR CONSTRUCTION PURPOSES.

N

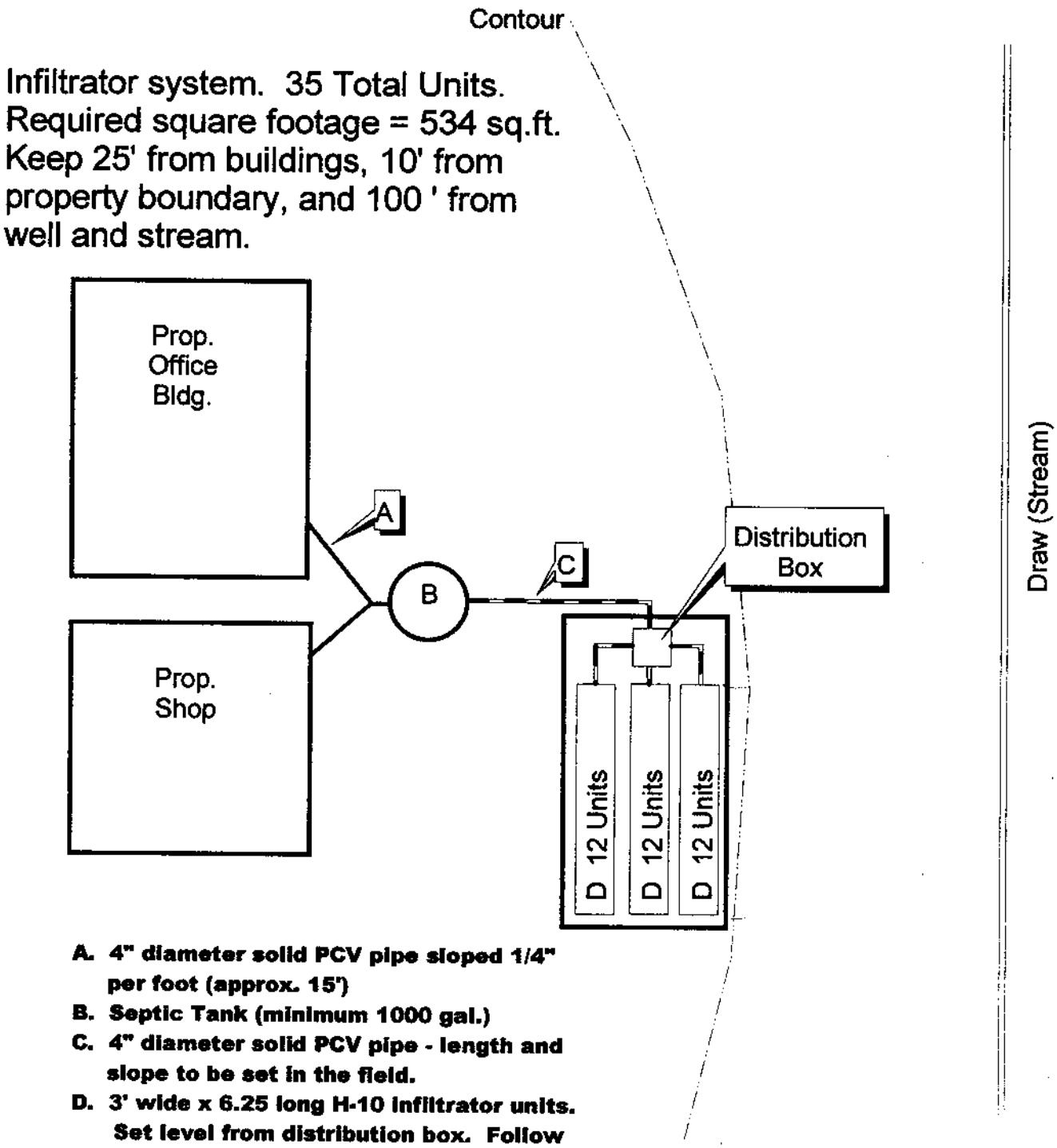
FIGURE 1: SITE PLAN
COLORADO DIVISION OF WILDLIFE
FOOTHILLS RESEARCH LAB – 4330 LAPORTE AVENUE
FORT COLLINS, COLORADO

Project Mngr: DAR	Terracon	Project No.	20005109
Designed By:		Scale:	NTS
Checked By: DAR	301 N. Howes Street	Date:	06/12/00
Approved By: WJA	Fort Collins, Colorado 80521	Drawn By:	KRW
File Name: 109FIG1		Figure No.	1

LEACH FIELD DETAIL
CDOW - DEER PENS
CROSS-SECTION
(Not To Scale)



PROPOSED TANK AND FIELD LAYOUT
CDOW - DEER PENS
(Not To Scale)



A. 4" diameter solid PCV pipe sloped 1/4" per foot (approx. 15')

B. Septic Tank (minimum 1000 gal.)

C. 4" diameter solid PCV pipe - length and slope to be set in the field.

D. 3' wide x 6.25 long H-10 infiltrator units. Set level from distribution box. Follow manufactures directions.

United States Environmental Protection Agency
Underground Injection Control Permit Application

Attachment O. – Plans for Well Failures

K. – Plans for Well Failures

The system will consist of a shallow on-site leach field with no-risk of sudden failure. At this time there are no plans for well failures.

United States Environmental Protection Agency
Underground Injection Control Permit Application

Attachment P. – Monitoring Program

P. – Monitoring Program

Currently, there is no planned monitoring program at this time.

United States Environmental Protection Agency
Underground Injection Control Permit Application

Attachment Q. – Plugging and Abandonment Plan

P. – Plugging and Abandonment Plan

Currently, there is no plugging and Abandonment Plan at this time.

United States Environmental Protection Agency
Underground Injection Control Permit Application

Attachment V. – Description of Business

V. – **Description of Business**

This shallow injection well will server as the primary treatment system for the Colorado Division of Wildlife, Foothills Wildlife Lab. The general scope of business planned at this facility will be to provide wildlife health services to the terrestrial section of the Colorado Division of Wildlife. This includes, animal necropsies and bench lab procedures.

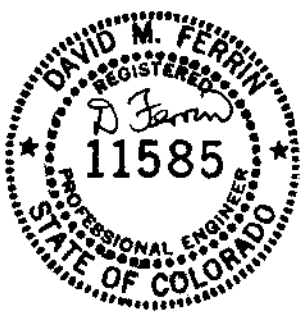
PERCOLATION TEST
FOR
CDOW - Deer Pens

N. of Ft. Collins Water Treatment Plant
Off LaPorte Ave.
Fort Collins

LARIMER COUNTY,
COLORADO

3 - 4 People Full Time
with Toilet, Sink, & Shower

Office and Lab
(½ hr. per day Necropsy use of water,
clothes washer/once per week,
& occasional showers)



D.M FERRIN
P.E. #11585

PERCOLATION TEST DATA

A) TIME/WATER DROP:

STABILIZED DROP
HOLE #1: 1/2"
HOLE #2: 1/4"
HOLE #3: 1/4"

CONVERTING TO MINUTES/INCH DROP:
HOLE #1: 30 MIN/INCH
HOLE #2: 60 MIN/INCH
HOLE #3: 60 MIN/INCH

AVERAGE OF 3 HOLES IS:

$$\frac{30 + 60 + 60}{3} = 50 \text{ min/inch}$$

USE 50 MIN/INCH

B) SOIL:

HOLE #1- #3:	0' - 1'	Black sandy silt
	1' - 2'	Red clayey sand w/ large rocks
	2' - 2 ½'	Gray clayey sand
BORE HOLE:	0' - 1'	Black sandy silt
	1' - 2'	Red clayey sand w/ large rocks
	2' - 4'	Gray clayey sand
	4' - 8'	Gray clayer sand w/ a little limestone

C) ADDITIONAL DATA:

THE TEST WAS RUN ON 4/21/00.
WEATHER WAS PARTLY CLOUDY.
TEMPERATURE WAS 65°.
ALL TEST HOLES WERE PRESOAKED OVERNIGHT.
ALL HOLES WERE 6" DIAMETER BY 2 1/2' DEEP.
WATER REMAINED IN TEST HOLES PRIOR TO TEST (WATER In #1 & 3, #2 WAS DAMP).
NO GROUNDWATER OR BEDROCK ENCOUNTERED TO 8' DEPTH.
GROUND SLOPES - SEE MAP.

LOG OF TEST BORING NO. 1

CLIENT: Colorado State Division of Wildlife

ARCHITECT / ENGINEER:

SITE: 4330 West Laporte Ave. Fort Collins, Colorado

PROJECT: 2 Proposed Structures

Approx. Surface Elev.: 106.6 ft.

GRAPHIC LOG	DESCRIPTION	DEPTH (FT.)	USCS SYMBOL	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES RECOVERY	SAMPLES SPT - N BLOWS/FT.	TESTS MOISTURE, %	TESTS DRY DENSITY PCF	TESTS UNCONFINED STRENGTH PSF
	0.5 6" TOPSOIL	106.1								
	SILTY CLAYEY SAND Brown, dry, medium dense	104.1	SC	1	SS	12"	16	12		
	2.5 SILTY SAND Tan, brown, gray, red, dry, medium dense		SM	2	SS	12"	12	4		
		5								
				3	SS	12"	19	2		
	10.5	96.1								
	WEATHERED CLAYSTONE/SILTSTONE 12.5 Tan, gray, moist, moderately hard	94.1								
	CLAYSTONE/SILTSTONE Tan, gray, moist, moderatley hard to hard									
		10								
				4	SS	12"	40	14		
	15.0 BOTTOM OF BORING	91.6								
		15								

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.

WATER LEVEL OBSERVATIONS			
WL	▽ DRY	WD	▽
WL			
WL	Initial Water Level Reading		

Terracon

BORING STARTED	6-1-00		
BORING COMPLETED	6-1-00		
RIG	CME-55	FOREMAN	DL
APPROVED	DAR	JOB #	20005109

LOG OF TEST BORING NO. 2

CLIENT: Colorado State Division of Wildlife

ARCHITECT / ENGINEER:

SITE: 4330 West Laporte Ave. Fort Collins, Colorado

PROJECT: 2 Proposed Structures

GRAPHIC LOG	DESCRIPTION		DEPTH (FT.)	USCS SYMBOL	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES RECOVERY	SAMPLES SPT - N BLOWS/FT.	TESTS MOISTURE, %	TESTS DRY DENSITY PCF	TESTS UNCONFINED STRENGTH PSF
	Approx. Surface Elev.: 106.3 ft.										
	0.5 6" TOPSOIL	105.8									
	SILTY CLAYEY SAND			SC	1	SS	12"	20	10		
	2.0 Brown, dry, medium dense	104.3									
	SILTY SAND										
	Tan, brown, gray, red, dry, medium dense			SM	2	SS	12"	25	3		
			5								
					3	SS	12"	20	2		
	9.5	96.8									
	WEATHERED CLAYSTONE/SILTSTONE		10								
	Tan, gray, moist, moderately hard										
	12.5	93.8									
	CLAYSTONE/SILTSTONE				4	SS	6"	50/0.5'	12		
	Tan, gray, moist, moderatley hard to hard		15								
	19.5	86.8			5	SS	6"	50/0.5'	6		
	BOTTOM OF BORING										

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.

WATER LEVEL OBSERVATIONS			
WL	▽ DRY	WD	▽
WL			
WL	Initial Water Level Reading		

Terracon

BORING STARTED	6-1-00		
BORING COMPLETED	6-1-00		
RIG	CME-55	FOREMAN	DL
APPROVED	DAR	JOB #	20005109

OTHER DATA:
INFILTRATOR SYSTEM

D) REQUIRED AREA:

AVERAGE PERC RATE:	50 MIN./INCH
FACTORIES/PLANTS W/ SHOWERS	35 GAL/PERSON/DAY X 4 PEOPLE 140 GAL/DAY
WASHER	19.5 GAL/PERSON/DAY X 4 PEOPLE 1 TIME/WEEK 15.6 GAL/DAY
NECROPSY	½ HR/DAY OR 30 MIN X 6 GAL/MIN 180 GAL/DAY
TOTAL DAILY USE:	335.6 GAL/DAY

REQ'D 534 SQ.FT. (INFILTRATOR SYSTEM)
USE 36 H-10 INFILTRATOR UNITS (TOTAL 558 SQ.FT.)

* LARIMER COUNTY HEALTH DEPARTMENT
INDIVIDUAL SEWAGE DISPOSAL SYSTEM REQUIREMENTS
JAN. 4, 1988 EDITION

VICINITY MAP
CDOW - DEER PENS
(Not To Scale)